CLAIMS

1. A vehicle window pane for slidable attachment to a motor vehicle,

characterized in that said vehicle window pane has an arcuately curved vertical section having, at every position thereof, a same radius of curvature that corresponds to a radius of curvature of a predetermined sliding movement path followed by said vehicle window pane, and a curved lateral section having a same radius of curvature at every position thereof, wherein said vertical section is a section along a plane parallel to the predetermined sliding movement path while said lateral section is a section along a plane intersecting the predetermined sliding movement path substantially at right angles thereto.

2. A vehicle window pane as recited in claim 1, wherein the radius of curvature in the curved vertical section and the radius of curvature in the curved lateral section are different from each other.

3. A vehicle window pane as recited in claim 1, wherein the lateral section is curved with a compound curvature composed of a continuous sequence of a plurality of radii of curvature which are different from the radius of curvature in the curved vertical section.

4. A vehicle window pane for slidable attachment to a motor

vehicle, characterized in that said window pane comprises a curved pane having a substantially uniform thickness with a principal surface thereof forming a curved surface, said curved surface being an aggregate of points satisfying the conditions:

(a) when a vector contacting said curved surface at a point on said curved surface is called a tangent vector, a tangent vector having a maximum curvature is called a first tangent vector, and a tangent vector having a minimum curvature is called a second tangent vector, all points on said curved surface have the first tangent vector and the second tangent vector intersecting with each other orthogonally;

(b) when a normal-direction vector at a point on said curved surface is called a normal vector and a plane including the normal vector at a selected point on said curved surface and the first tangent vector is called a normal section plane, all curvatures on a curve formed at an intersection where said curved surface and a normal section plane meet accord with the maximum curvature;

(c) said curve formed at said intersection where said curved surface and said normal section plane meet follows a path of sliding movement of said window pane;

(d) the maximum curvature is not equal to the minimum curvature; and

(e) the minimum curvature is not zero.

5. A vehicle window pane as recited in claim 4, wherein the minimum curvature is constant at all points on said curved

surface.

6. A vehicle window pane as recited in claim 4, wherein curvatures extending within an angular range defined by and between the first tangent vector and the second tangent vector vary continuously from the maximum curvature to the minimum curvature.

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7. A vehicle door structure comprising:

a vehicle window pane as recited in any one of the preceding claims;

a door body having an attachment space for slidable attachment therein of said vehicle window pane and a pocket opening communicating with said attachment space for receiving said vehicle window pane for sliding movement in and out of said pocket opening with a substantially uniform clearance left between an outer peripheral surface of said vehicle window pane and an inner surface of said door body defining said pocket opening;

a pair of guide rails formed in opposed inner surfaces of said door body and having a same radius of curvature as the predetermined sliding movement path of said vehicle window pane, so as to guide the sliding movement of said vehicle window pane in and out of said pocket opening relative to said door body; and

a window regulator for sliding said vehicle window pane along said guide rails.